

ABSTRACT OF THE DISCLOSURE

Disclosed is a method and apparatus for controlling downstream traffic in an EPON (Ethernet Passive Optical Network). Individual tokens respectively for ONUs (Optical Network Units) are generated and stored, and a common token based on a total transfer rate of the EPON is generated and stored. In order to transmit downstream data, it is determined whether the downstream data is transmittable first by the corresponding individual token, and then second by the common token if the first determination is negative. In the case where traffic is concentrated on an ONU at a time, even if downstream data cannot be transmitted by an individual token for the corresponding ONU, the common token not used by other ONUs can be used to transmit the downstream data. It is thus possible to guarantee minimum/maximum transfer rates to all ONUs and ensure QoS against burst traffic in the EPON.